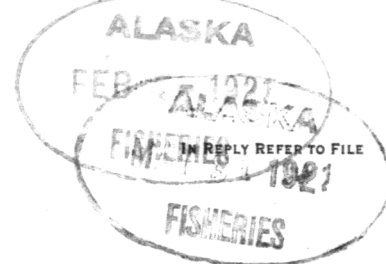


DEPARTMENT OF COMMERCE

BUREAU OF FISHERIES

WASHINGTON

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Fishery Work in Southeastern Alaska in 1920.

Introduction.

This report is a brief review of the work accomplished by the field force in southeastern Alaska from July 1, the date on which the writer took active charge of the affairs of the district, to the end of the season. It will be a plain statement of facts, descriptive of work performed, with such discussion of conditions as is possible in the light of available information.

The Alaska Service personnel in this district consisted of one assistant agent, four wardens, and the officers and crews of three boats. In addition to this force, four men were employed as stream watchmen, three of whom came from Seattle, while one was a resident of Juneau. A local agent was also employed at Ketchikan to report the price of fish to several towns in Alaska, and for short periods each month temporary employment was given to an office assistant at Juneau.

The force of regular employees was actively engaged, from late in July until the end of the season, in patrolling the fishing grounds, reporting violations of the fishery laws and regulations and assisting in the prosecution of the same, and marking by suitable signs the closed area off the mouths of several salmon streams. In the performance of this work, three Bureau owned boats were operated, while three privately owned ones were chartered and also kept in service from two to three months during the height of the fishing season.

Several naval vessels were in southeastern Alaska during the summer, but only one of them, subchaser No. 294, while commanded by Lieut. Thompson, rendered any assistance to the Bureau in patrol work and enforcement of the fishery laws. As they were not accountable to, or in any way responsible to the Bureau, no record of the work performed by each vessel can be attempted in this report beyond the period that a warden of the Service was assigned to subchaser 294.

Stream Improvement.

After the organization of the Territorial Fish Commission, the Bureau relinquished to it all stream-improvement work. As the Commission was under no obligation to make known to this Bureau the scope of its activities, no information is available at this writing as to how many or which streams were cleared of obstructions during the summer of 1920. It is known, however, that Philip R. Hough, formerly a warden in this Service, with three assistants, spent practically three months clearing streams, and that attention was given chiefly to the creeks on Admiralty, Baranof, and Chichagof Islands, and the mainland north and west of Juneau.

Barriers in the streams consist mainly of windfalls, against which debris and gravel have lodged until abrupt falls of surprising height have formed. In many cases these windfalls were trees of considerable size, the removal of which often necessitated the use of dynamite. Though not entirely preventing the ascent of salmon in all cases, they impeded their progress and in seasons of little or no rain constituted insurmountable barriers. To remove them and make available to salmon the largest possible spawning area is unquestionably a worthy undertaking, yet it would be inadvisable to remove every windfall and other minor obstruction that may not be impassable as they form resting places for both adult and young salmon and often afford protection to the salmon from their enemies of the field and air.

It is a peculiarity of many Alaskan streams that they fall over ledges of rock of varying thickness, the removal of which would be a difficult and costly undertaking, and one of doubtful value as salmon had not previously used such streams. These streams might, however, be excellent areas for the incubation of salmon eggs, as they may not be the habitat of fish that feed on eggs and fry of salmon.

Stream Watchmen.

It becomes more apparent as the seasons come and go that adequate protection of the salmon at any stream can hardly be attained except by stationing a watchman or two at each one from the beginning to the end of the fishing season. Under the present rather intensive seine fishing still possible after every legal protection by regulation has been applied, there is some uncertainty of maintaining the supply of salmon by any other scheme of protection pending the enactment of much needed legislation on the subject by Congress.

In the light of the experiences of 1920, it would seem that the greatest good in protecting the salmon fisheries of Alaska can be accomplished by continuing and enlarging the stream-watchman service as an adjunct to the regular patrol work. On July 1, Fred W. Dost, Eric N. Aldrich, Earl C. Nelson, of Seattle, and J. F. Ross, of Juneau, were

employed as stream watchmen. Special attention was given to Chilkat, Chilkoot, and Taku Rivers, Eagle Creek, Anan Creek, and the streams entering Thorn Bay.

The inadequacy of this service is apparent when a comparison is made between the number of salmon streams given attention in 1920 and the total number of deserving streams in southeastern Alaska. Probably not more than 2 per cent of the streams of the district could be watched by a force of 4 men, and even then it might be easily possible that they were watching streams of secondary importance. Because a stream attracted a good run of salmon in 1919 was not in itself a safe criterion for judging that it would be equally attractive in 1920, yet there was no other means of knowing the relative importance of any stream except by the records of past years. Salmon runs fluctuate, and for that reason unavoidable mistakes may be made in determining at the opening of any season the localities which will have the best runs and be most intensively fished. Errors may therefore be made in placing the watchmen. It is not impossible that the runs will have ceased at particular streams which should have been watched before it became known to the Bureau's agents that such streams were more than ordinary producers of salmon. The men in the field have no certain means of knowing the streams having the largest runs except by inquiry at the canneries or of the fishermen from whom reliable information is not easily obtained, or by direct personal investigations. Only by the latter course is one able to learn the real facts concerning the runs of fish and be able to determine with a fair degree of accuracy those places where watchmen should be placed, and this can not be done before the run begins. Herein lies one of the chief values of an effective patrol.

Alaska Fishery Intelligence Service.

The worth of this service depends entirely upon the regularity with which the price of fish is reported to the several towns in Alaska reached by it. Irregular reports fail to interest those they are intended to serve.

Inquiry at the Juneau cable office regarding the frequency of these reports from the local agent at Ketchikan elicited the somewhat surprising information that the price of fresh and pickled fish was not reported but a few times each month. It was therefore apparent that the service had practically collapsed and was of no value to any one. F. J. Furnivall, local agent at Ketchikan, was accordingly notified at the end of October that the Bureau would dispense with his services thereafter.

It may not be easy to secure a new local agent at Ketchikan as the salary of \$10 per month allowed for this service is not attractive and does not seem to be an adequate compensation for the time and work involved in a strict and conscientious attention to the duties thus imposed.

Reports of the price of fish are also sent out by the local agent at Seattle but they do not especially concern the writer, as he has no direct dealing with that agent.

Patrol Service.

Bureau Vessels.

Three Bureau owned boats were operated in southeastern Alaska in 1920, namely, Auklet, Murre, and Osprey. The burden of patrol work fell on the Auklet and Murre, both of which were in commission and operation throughout the year, except during the time that necessary repairs were being made. The Murre was used in census work by the Bureau of Education from January 1 to some time in April when she struck a reef in Rocky Pass, causing serious damage to the keel and hull, repairs to which were not completed until late in May. The Auklet was active during the first five months of the year in the work of our Service, but neither it nor the Murre could be used in June on account of the lack of funds for their operation. For the same reason, very necessary repairs to the Auklet were postponed until July. It was then given a general overhauling, including the reboring of the engine. The engine of the Murre was also rebored in July. The boats were not ready for work until late in the month, but from that time until the close of the fishing season, they were active in patrol duties, the Auklet covering the Ketchikan district, while the Murre was used in the Juneau district. Subsequently both boats did considerable cruising in connection with the marking of streams.

The Auklet cruised approximately 7,500 miles during the year. The Murre made a similar record of about 6,500 miles.

The Osprey returned to southeastern Alaska from Cordova about the middle of July, and thereafter until November 1, was engaged in the work of marking the mouths of streams. During the four months of her operation, she cruised 3,786 miles. On November 3, she was laid up for the winter at Wrangell, and three of her crew were discharged.

The Puffin was not in commission during the year.

In addition to the Bureau boats operating in southeastern Alaska, three privately owned power boats were chartered for a period of from one and a half to two and a half months. Of these, the Dixie was the largest, being about the size of the Murre though built on very different lines. She was powered with the same size and make of engine as the Murre and Auklet, and had a cruising speed of 9 miles an hour as compared with 7 by the Bureau's boats. The other two boats, Anthouette, and Try It, were less than 30 feet in length, and each was operated by one man. The Anthouette was used by Warden C. C. Combs in watching the Chilkat and Chilkoot Rivers; the Try It was chartered for the use of Stream Watchman J. F. Ross at Taku River and other streams in the vicinity of Juneau.

The mileage of these boats was not made a matter of record.

Naval Vessels.

The Navy Department sent two subchasers, an Eagle boat, a mine sweeper, four torpedo boat destroyers, and a battleship into Alaskan waters, all but the latter of which were advertised as being in Alaska to assist in the enforcement of law, particularly the laws and regulations for the protection of the fisheries.

Subchaser 294, commanded by Lieut. J. D. Thompson, U. S. N., performed excellent service in the Ketchikan district, but this work was unfortunately terminated about the end of August when he was relieved from command and ordered to Bremerton. Though 294 remained in Alaska several weeks longer, the vessel was Juneau most of the time and of no further service to the Bureau.

Subchaser 310 was stationed at Juneau, and it virtually spent the season there. At no time did it afford assistance to the Bureau's employees in their patrol work, though on two or more occasions assistance was requested, which in each instance was refused, the reason at one time being that the vessel could not leave port on fishery work while the disabled Eagle 57 was at Juneau.

On July 3, Eagle 57 struck a rock near Gambier Island and lost her propeller. The following day she was towed to Juneau by the Coast and Geodetic Survey steamer Explorer where she remained until towed to the Bremerton Navy Yard several weeks later. This vessel performed no service for any federal bureau or department represented in Alaska.

The Swallow, a mine sweeper of more than 1000 tons displacement, was sent to Alaska about the middle of August to take the place of Eagle 57, but like it, this vessel was run on the rocks while making her voyage to Alaska and was so seriously damaged as to necessitate immediate return to Bremerton. No service in the interest of the fisheries was performed by the Swallow.

The three torpedo boat destroyers spent several days in Alaskan Waters, but, owing to their size, they were useless as patrol boats. What ever good to the fisheries resulted from their presence in Alaska was purely the psychological effect on the fishermen.

Lieut. Thompson made praiseworthy efforts to break up the robbing of fish traps in the Ketchikan district by a constant patrol of the region. On several occasions he detailed sailors from his vessel to assist in guarding the traps from which salmon were being stolen. Though it is not recorded that any robbers were taken, it was generally admitted that the placing of these men on various traps had a salutary effect on those engaged in this nefarious business.

In one or two instances, Lieut. Morse detailed a few men from Sub-chaser No. 310 to guard duty on traps in the Icy Strait region where

robberies were occurring. The writer does not know that any complaints or arrests were made by any one connected with this vessel.

It was understood, however, that the commanding officer of each Naval vessel in Alaska held a commission as a special deputy United States marshal, and that on the larger vessels there was one officer who was appointed by the judge of the district court as a United States commissioner. But notwithstanding the prerogatives and powers these officers thus possessed, and the means at their command to exercise the duties of their respective offices, the records of the courts of the first judicial division do not show that they tried any cases, or reported any violations, or assisted in the prosecution of any violations of the fisheries laws.

The commanding officer of the Naval fleet submitted a report which was largely a discussion of the condition of the fisheries, their needs, and recommendations for patrol regarding subsequent seasons. Mention was also made of the large amount of illegal fishing that was being carried on, but this report was not a record of work accomplished which could in any manner be said to have been in the interest of the protection of the fisheries. The author of the report spent very little time in Alaska, and none of the men working under his command spent any time on the fishing grounds except as hereinbefore indicated.

Violations of the Fishery Laws.

Several violations of the laws and regulations affecting the fisheries of Alaska were reported by employees of the Bureau, all of which have been covered by special reports from time to time. These offenses included fishing with nets in streams and failure to close the tunnels and open the heart walls of traps during the weekly close season. In addition, several cases held over from 1919 were also disposed of, the details of which have already been reported.

Considerable animosity toward Bureau employees was developed by reason of their action in reporting packing companies for carelessness and neglect, whether intentional or accidental, in complying with the statute which provides for the regulation of fish traps during the weekly close season. This animus was held largely by the owners and superintendents of canneries whose traps were not closed in accordance with law as understood by the employees of the Bureau, and it eventually registered itself in several written protests and requests for the removal of at least one employee. (O'Connor) Settlement of this matter is still pending.

No specific instructions have ever been issued to the men in the field for their guidance in determining what constitutes a violation of the law in the matter of closing the tunnel of a fish trap. The law says the tunnel must be closed during a certain period each week. Compliance with this mandate narrows down to the judgment of the operator as against that of the inspector. If these judgments disagree, there is legal ground for contest, which if decided adversely to the contention of the operator, excites him to an abuse of the inspector.

Thefts of Salmon.

Stealing salmon from fish traps has caused certain operators in southeastern Alaska no little concern in recent years. In 1920, it was alleged that salmon were taken unlawfully from traps in the Icy Strait region and in the extreme southern part of the district south and west of Ketchikan. Numerous complaints of this nature were made to the Governor of Alaska, and at least one was made to the Bureau. It was also asserted that attempts at robbery were often preceded by threats of violence to the trap watchmen, and demonstrations of lawlessness in the use of firearms at the time robberies were committed. Several appeals for assistance in suppressing this business were made to the authorities having jurisdiction over such matters.

In response thereto, subchaser No. 294 maintained the utmost vigil over the affected region in the southern part of the district, but with all its close attention to the work, no robbers were apprehended. Much good, of which no estimate can be made, doubtless resulted from the patrol by this vessel, but little or no credit was given therefor by those in whose interest and for whose benefit the work was performed. In the northern part of the district, subchaser No. 310 made a few unsuccessful attempts to break up the practice, but the so-called pirates probably had no difficulty in keeping track of the chaser, and consequently were able to operate unmolested.

Some packing companies organized effective patrols of their own. This was done by using small boats as scouts, which were put on regular runs during the night in the region where traps were most likely to be raided.

One company reported its troubles to the United States attorney at Juneau, who caused to be laid before the grand jury in September certain information which resulted in the indictment of four men who were accused of being engaged in the business of taking salmon from traps which did not belong to them. The indictment covered four counts, each of which alleged that on certain days in June and July the defendants had unlawfully and feloniously removed from designated fish traps of the Deep Sea Salmon Company several hundred salmon.

When this case came on for trial, it was most unfortunate that the chief witness for the prosecution had been a member of the crew of the boat used in the taking of salmon, and was supposed to have known the nature of the business in which they all were then engaged and to have profited thereby. Counsel for the defense was quick to detect this weakness in the case, and he immediately moved for a dismissal on the ground that a case could not be established on the uncorroborated testimony of accomplices. The judge sustained the motion in so far as it applied to the three members of the crew, but he ruled that the testimony was competent as against the master of the vessel who had negotiated each transaction independently of the other men. The case against the master of the boat was then given to the jury. He was acquitted.

An interesting feature of the trial was the proving that in three instances the defendant had paid the trap watchman for the salmon taken, while in the remaining instance it was unproven that he had not done so. It was shown that there was no watchman at one trap when salmon were taken, but inasmuch

as the defendant went ashore while the boat was at the trap, he was given the benefit of the reasonable doubt that he may have met the watchman and completed the transaction there by paying for the salmon.

It was also shown at the trial that salmon were not taken from traps watched by honest men. In every instance, the dishonesty of the watchman was essential to the success of the undertaking. Such being a fact, the discharge of these unfaithful men would seem to have been the first and most effective remedy of the evil applied by the trap operators, and that this action would invariably have been taken before appeal was made to the officers of the law.

The loss of salmon was inconsiderable, as the boats engaged in the traffic were small and incapable of handling more than a few thousand salmon at one time. It was also evident that the watchmen were in sympathy with those engaged in this illegal business as the monetary consideration to them was very small. It had to be if the buyers were to make a profit out of the transactions as had they paid the market price for their illgotten salmon the business would have failed by reason of its unprofitableness.

Salmon Runs.

The results of salmon fishing in southeastern Alaska in 1920 indicate that there was a material falling off in the supply of fish, and upon a superficial examination of the situation this view is likely to be accepted as correct. It was estimated that the shrinkage would equal 30 per cent of the catch in 1919, the greatest decline being shown in the catch of humpback and chum salmon. The smaller catch of those species was hardly due to any lessening of operations, as fishing was apparently carried on with as much or more assiduity than ever before. In view of this fact, it is evident that there was an actual shortage of salmon, operations being unaffected by any unusual weather conditions. It is further apparent that the slump was not localized but was of a general nature and was felt in all sections of the district. Only a few companies made their expected pack, and they were enabled to do so largely by the continuation of fishing late in the season, or by being more fortunate in the location of their traps and the choice of fishing grounds. Those who failed to make their packs had good reason to fear that the scarcity of salmon in 1920 was an evidence of the serious depletion of the fisheries.

It is not necessarily true, however, that these fisheries have suffered permanent impairment, for doubtless every fishery has its ups and downs, its lean years and good ones. Again, erroneous judgments are formed by making comparisons of the records of poor years with those of good years which are often accepted as standards for gauging the success or failure of subsequent years. In a review of the condition of the salmon fisheries, such as this, irrespective of species, allowance must be made for the seasons when no special effort was made to pack certain varieties. This applies particularly to chum salmon as only in recent years has the market value of chums justified the packing of them. It is also true that the catch of coho salmon can not be accepted

as a criterion of the condition of the fisheries, as a number of packers made no effort to take that species/ owing to its somewhat later appearance than the other kinds. By this process of elimination, it appears that the only safe ground on which to judge fairly the condition of the salmon fisheries of southeastern Alaska is a comparison of the catches of red, king, and humpback salmon through several seasons.

From 1908 to 1919, inclusive, the catch of red salmon has been remarkably uniform. That this was a fact notwithstanding that red salmon were the most highly prized and relentlessly sought of all the species is even more surprising. Furthermore it is worthy of note that this consistency in catch was unaffected by the limitations of fishing which were recently imposed by departmental orders, the catch in 1919 being next to the largest ever made in the district.

This record contains no evidence of a failing supply of red salmon, as through all these years the average catch was 2,751,220. In the period under consideration, the lowest level was reached in 1913, when the catch was 505,262 below the average, and the highest in 1914, when the catch exceeded the average by 713,314. The catch in 1920 will be very close to the average for the fourteen years immediately preceding. From this showing, it certainly does not appear that the red salmon fisheries of southeastern Alaska are suffering depletion.

Assuming that the catch of humpback salmon in southeastern Alaska in 1920 will be approximately 20,000,000 fish, we find that this total is one-third less than the number taken in 1919, and approximately one-half less than the catch in both 1917 and 1918, the years of peak production. In looking over the records from 1906 to 1919, it is found that beginning with 1911 and continuing to 1919 inclusive, the catch of humpback salmon in each of those years ^{except 1914} was larger than the probable catch in 1920. However, the catch in 1920 compares very favorably with that of 1911, 1912, and 1916.

Admitting that there is reason for apprehension that the runs of humpback salmon have been destructively fished, and that the run to certain streams has been all but annihilated, it is not to be conceded that this fishery has commenced a decline from which there can and will be no recovery unless radical changes are made in the scale of fishery operations. The situation is serious, and no relief is in sight until close seasons are established by law. It is a vain hope that the packers will voluntarily suspend operations for a season or two. No more propitious opportunity for them to do so could have been presented than was done in 1920. The bulk of the pack of 1919 was still unsold and could not be moved, and liquidations for that year had not been made, yet more canneries were operated and fishing was more intensive in 1920 than ever before. The result was that the pack of another season was added to that already on hand, and the market further stagnated by this accumulation. Thus an opportunity to have benefitted and revived this fishery was lost. The total suspension of operations during the season of 1920 would have meant much to the humpback-salmon fisheries.

The king-salmon fishery is also in a precarious condition as the catch

in 1920 will probably be the lowest in ten years and fall below the average for the last fourteen. It is not improbable that the best evidence of the decline of this fishery is found in the increasing use of king salmon for canning and the corresponding shrinkage in mildcure operations. In view of this situation, it may be inferred that the size of many king salmon caught in 1920 was such as to make them undesirable for mildcuring, and that during the years when the bulk of the catch was used in mildcure operations all such undersized salmon were thrown away. If the catch in 1920, consists largely of small kings, which in previous years would not have been used, and if only by the use of such fish the catch this year approaches that of past years, it is a reasonable deduction that the supply is not continuing unimpaired.

Although a doubt exists that the condition of the king salmon fishery is not what it should be, no special concern is felt in respect thereto, its economic importance being much less than that of the humpback and chum salmon fisheries. Upon them, the great salmon industry of southeastern Alaska is largely dependent, and upon the preservation of commercial runs of those species the supremacy of the industry is contingent.

No extensive examination of streams was made or was possible during the time salmon were running, though several streams were visited incidentally in the posting of notices at the mouths defining the protected areas. In many of those streams, fair numbers of salmon were observed, while other creeks were almost abandoned. Considering the oft repeated statement, by men who presumed to speak with knowledge of the facts, that no salmon had escaped the fishing apparatus operated commercially, it was surprising indeed to find that any considerable number of salmon had reached the streams and would spawn. To some extent, climatic conditions may have effected the escapement of salmon, as during July there was no precipitation of consequence, and therefore the volume of water in the streams was materially reduced, rendering them less attractive to salmon.

Stream Marking.

Notices marking the closed area were posted at the mouths of approximately 200 streams scattered throughout the district. Attention was first given to the most important streams, but later, no discrimination was made as marking was then carried on with a view to covering all salmon streams in a certain section. Where the character of the stream was not known, notices were not posted. In such cases, further examination is necessary.

A separate report has been submitted on this work. It shows by accompanying sketches the particular streams marked during the season.

Personnel.

This report would be incomplete without recording my appreciation of the loyalty of the men working under my direction and of their conscientious attention to the work entrusted to them. Each member of the force assigned to the district under my supervision carried on his particular duties in the interest of the service as he saw it, often at great personal sacrifice, and always in total disregard of the effect it might have upon himself. It has been the aim of the force to keep constantly in mind the needs of the fisheries and their protection, making everything else subservient thereto. In the performance of this duty as thus understood, the service was attacked and abused, publicly and privately, collectively and individually, by the prejudiced, the ignorant and jealous, and in some instances by those who knew better but were unkindly disposed or purposely hostile; but with all this, the service lives, and it will go on undaunted by the condemnation heaped upon it.

To the men who worked with me is due a recognition of their faithful service, and to each of them is here given the fullest measure of commendation.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "E. M. Ball".

Assistant Agent.